

**CLAIMS**

1. A hydrocarbon conversion catalyst comprising a modified beta zeolite, an amorphous inorganic oxide and a hydrogenation component wherein the said catalyst support has an  $\text{NH}_3\text{-AI}$  of less than 3.5, preferably less than about 2.3, and/or an  $\text{IEC-AI}$  of less than 3.7, preferably less than about 2.7.
2. A hydrocarbon conversion catalyst of claim 1, in which the modified beta zeolite has a  $\text{SiO}_2\text{:Al}_2\text{O}_3$  molar ratio of at least 50.
3. A hydrocarbon conversion catalyst of claim 1, in which the modified beta zeolite has a  $\text{SiO}_2\text{:Al}_2\text{O}_3$  molar ratio of at least 100.
4. A hydrocarbon conversion catalyst of claim 1, in which the said hydrogenation components are selected from the elements of Group VIII and/or Group VI B.
5. A hydrocarbon conversion catalyst of claim 1, in which the amorphous inorganic oxide is selected from alumina, silica, titania, zirconia, magnesia, boria, phosphorous oxides and their combinations.
6. A hydrocarbon conversion process that comprises contacting a hydrocarbon feedstock in the presence of hydrogen under hydrocarbon conversion conditions with a catalyst according to any of the proceeding claims.

## AMENDED CLAIMS

[received by the International Bureau on 05 December 2003 (05.12.03);  
original claims 1-6 replaced by new claims 1-8 (2 pages)]

1. A hydrocarbon conversion catalyst comprising a modified beta zeolite, an amorphous inorganic oxide and a hydrogenation component, wherein the said catalyst support has an  $\text{NH}_3$ -TPD Acidity Index of less than 3.5 and/or an Ion Exchange Capacity-Acidity Index of less than 3.7.
2. A hydrocarbon conversion catalyst of claim 1, in which the  $\text{NH}_3$ -TPD Acidity Index is less than 2.3 and/or the Ion Exchange Capacity-Acidity Index is less than 2.7.
3. A hydrocarbon conversion catalyst of claim 1, in which the modified beta zeolite has a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  molar ratio of at least 50.
4. A hydrocarbon conversion catalyst of claim 1, in which the modified beta zeolite has a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  molar ratio of at least 100.
5. A hydrocarbon conversion catalyst of claim 1, in which the said hydrogenation components are selected from the elements of Group VIII and/or Group VI B.
6. A hydrocarbon conversion catalyst of claim 1, in which the amorphous inorganic oxide is selected from alumina, silica, titania, zirconia, magnesia, boria, phosphorous oxides and their combinations.

7. A hydrocarbon conversion process that comprises contacting a hydrocarbon feedstock in the presence of hydrogen under hydrocarbon conversion conditions with a catalyst according to any of the proceeding claims.

8. A hydrocarbon conversion process according to claim 7, in which the process comprises selective conversion of hydrocarbons to middle distillates in a hydrocracking process.